

TOWNSEND and TOWNSEND and CREW LLP

By /Shannon O'Connor/
Shannon O'Connor

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Hemant P. Mungekar et al.

Application No.: 10/660,813

Filed: September 12, 2003

For: REACTIVE ION ETCHING FOR
SEMICONDUCTOR DEVICE
FEATURE TOPOGRAPHY
MODIFICATION

Customer No.: 57385

Confirmation No.: 7055

Examiner: Rodney Glenn McDonald

Art Unit: 1795

TRANSMITTAL LETTER –
RESPONSE TO SUPPLEMENTAL
NOTICE OF ALLOWABILITY

Mail Stop Issue Fee
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Pursuant to the Supplemental Notice of Allowability, dated September 30, 2009,
enclosed are the following to be made of record in the above-identified application:

- 1) Utility Patent Application Transmittal (as filed 9/12/09);
- 2) Combined Declaration and Power of Attorney (as filed 9/12/09);
- 3) Application Data Sheet (as filed 9/12/09);
- 4) Transmittal of New Application (as filed 9/12/09);

The Commissioner is hereby authorized to charge any additional fees associated with this paper or during the pendency of this application, or credit any overpayment, to Deposit Account No. 20-1430.

Respectfully submitted,

/Jason A. Sanders/

Jason A. Sanders
Reg. No. 59,984

Customer No. 57385

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, Eighth Floor
San Francisco, California 94111-3834
Tel: 415-576-0200
Fax: 415 576-0300
J7S:seo

62289967 v1

UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

Attorney Docket No. A8067/T51700

First Inventor Mungekar, Hemant P.

Title REACTIVE ION ETCHING FOR SEMICONDUCTOR
DEVICE FEATURE TOPOGRAPHY MODIFICATION

Express Mail Label No. EV34111016245

APPLICATION ELEMENTS

See MPEP chapter 500 concerning design patent application contents.

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17)
(Submit an original and a duplicate for fee processing)
2. ☐ Applicant claims small entity status.
See 37 CFR 1.27.
3. ☒ Specification [Total Pages 32]
(preferred arrangement set forth below)
- Descriptive title of the invention
- Cross References to Related Applications
- Statement Regarding Fed sponsored R & D
- Reference to sequence listing, a table
or a computer program listing appendix
- Background of the invention
- Brief Summary of the invention
- Brief Description of the Drawings (if filed)
- Detailed Description
- Claim(s)
- Abstract of the Disclosure
4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 12]
5. Combined Declaration and POA [Total Pages 4]
 - a. ☒ Newly executed (original or copy)
 - b. ☐ Copy from a prior application (37 CFR 1.63 (d))
(for a continuation/divisional with Box 18 completed)
 - c. ☐ DELETION OF INVENTOR(S)
Signed statement attached deleting inventor(s)
named in the prior application, see 37 CFR
1.63(d)(2) and 1.33(b).
6. ☒ Application Data Sheet. See 37 CFR 1.76

ADDRESS TO

Mail Stop Patent Application
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

7. ☐ CD-ROM or CD-R in duplicate, large table or
Computer Program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission
(if applicable, all necessary)
 - a. ☐ Computer Readable Form (CRF)
 - b. Specification Sequence Listing on:
 - i. ☐ CD-ROM or CD-R (2 copies); or
 - ii. ☐ paper number of pages
 - c. ☐ Statements verifying identity of above copies

ACCOMPANYING APPLICATIONS PARTS

9. ☒ Assignment Papers (cover sheet & document(s))
10. ☐ 37 CFR 3.73(b) Statement ☐ Power of
(when there is an assignee) Attorney
11. ☐ English Translation Document (if applicable)
12. ☐ Information Disclosure ☐ Copies of IDS
Statement (IDS/PTO-1449 Citations
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503)
(Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s)
(if foreign priority is claimed)
16. ☐ Nonpublication Request under 35 U.S.C. 122
(b)(2)(B)(i). Applicant must attach form PTO/SB/35
or its equivalent
17. ☐ Other:

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☒ Continuation-in-part (CIP)

of prior application No. 10/278,861

Prior application information: Examiner Not yet assigned

Art Unit: 1762

For CONTINUATION or DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

19. CORRESPONDENCE ADDRESS

☐ Customer Number

OR ☒ Correspondence address below

Name Patent Counsel, M/S 2081
Applied Materials, Inc.

Address Legal Affairs Department
P.O. Box 450A

City Santa Clara

State CA

Zip Code 95052

Country

Telephone

Fax

Name (Print/Type)

Robert W. Mungekar

Registration No. (Attorney/Agent)

25,436

Signature

Date

SEPT. 12, 2003

This collection of information is required by 37 CFR 1.53(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.54. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed form to the USPTO. Time will vary depending upon the individual case. Any comments in the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Mail Stop Patent Applications, P.O. Box 1450, Alexandria, VA 22313-1450. 80033271 v1 If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

This declaration is of the following type:

- ☐ original
- ☐ divisional
- ☐ continuation
- ☒ continuation-in-part

INVENTORSHIP IDENTIFICATION

My residence, post office address and citizenship are as stated below next to my name. I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

TITLE OF INVENTION

***REACTIVE ION ETCHING FOR SEMICONDUCTOR DEVICE FEATURE TOPOGRAPHY
MODIFICATION***

SPECIFICATION IDENTIFICATION

The specification of which:

- ☒ is attached hereto
- ☐ was filed on _____, under Application No. _____, executed on even date herewith; or
- ☐ Express Mail No. _____ (as Application No. not yet known) and was amended on _____ (if applicable)
- ☐ was described and claimed in PCT International Application No. _____ filed on _____ and as amended under PCT Article 19 on _____.

ACKNOWLEDGEMENT OF REVIEW OF PAPERS AND DUTY OF CANDOR

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose all information I know to be material to patentability in accordance with Title 37, Code of Federal Regulations, §1.56,

and which is material to the examination of this application; namely, information where there is a substantial likelihood that a reasonable Examiner would consider it important in deciding whether to allow the application to issue as a patent, and

- ☐ In compliance with this duty there is attached an Information Disclosure Statement in accordance with 37 CFR §1.98.

PRIORITY CLAIM (35 U.S.C. §119)

I hereby claim foreign priority benefits under Title 35, United States Code, §119, of any foreign application(s) for patent or inventor's certificate or of any PCT international application(s) designating at least one country other than the United States of America listed below, and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed.

- ☐ No such applications have been filed.
- ☐ Such applications have been filed as follows:

- A. Prior foreign/PCT application(s) filed within 12 mos. (6 mos. for design) prior to this application, and any priority claims under 35 U.S.C. §119

<u>Country/PCT</u>	<u>Application No</u>	<u>Date Filed</u>	<u>Priority Claimed</u>	
			<input type="checkbox"/> Yes <input type="checkbox"/> No	
			<input type="checkbox"/> Yes <input type="checkbox"/> No	
			<input type="checkbox"/> Yes <input type="checkbox"/> No	

- B. All foreign application(s), if any, filed more than 12 mos. (6 mos for design) prior to this U.S. application

Country:
Application No:
Filing date:

PRIORITY CLAIM (35 U.S.C. §120)

I hereby claim the benefit under Title 35, United States Code, §120, of any United States application(s) or PCT international application(s) designating the United States of America that is/are listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose information that is material to the examination of this application (namely, information where there is substantial likelihood that a reasonable Examiner would consider it important in deciding whether to allow the application to issue as a patent) which occurred between the filing date of the prior application(s) and the national or PCT international filing date of this application.

- ☐ No such applications have been filed
- ☒ Such applications have been filed, as follows:

<u>Application No.</u>	<u>Filing Date</u>	<u>Status</u>		
		<u>Patented</u>	<u>Pending</u>	<u>Abandoned</u>
10/279,961	10/23/2002		X	

POWER OF ATTORNEY

I hereby appoint the following attorneys and/or agents to prosecute this application and transact all business in the Patent and Trademark Office connected therewith:

Peter J. Sgarbossa	Registration No. 25,610
Joseph Bach	Registration No. 37,771
Loretta A. Peters	Registration No. 43,855
Raymond Kam-On Kwong	Registration No. 37,165
James C. Wilson	Registration No. 35,412
Robert W. Mulcahy	Registration No. 25,436
Robert C. Colwell	Registration No. 27,431
William L. Shaffer	Registration No. 37,234
Chun-Pok Leung	Registration No. 41,405
Patrick R. Jewik	Registration No. 40,456
Kent J. Tobin	Registration No. 39,496
Patrick M. Boucher	Registration No. 44,037

Send correspondence to: Direct telephone calls to:

Patent Counsel, MS/2061	Patrick M. Boucher
Legal Affairs Dept.	(303) 571-4000
Applied Materials, Inc.	
P.O. Box 450A	
Santa Clara, CA 95052	

DECLARATION

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and, further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Sec. 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patents issued thereon.

Full name of sole or first inventor: HEMANT P. MUNGEKAR

Inventor's signature: *H. Mungekar* Date: 09/10/03

Country of Citizenship: India

Full name of second inventor: ANJANA M. PATEL

Inventor's signature: *Ampatel* Date: 09/10/03

Country of Citizenship: United States

Full name of third inventor: MANOJ VELLAIKAL

Inventor's signature: *Manoj vellalaikal* Date: 9/11/03

Country of Citizenship: United States

Full name of fourth inventor: ANCHUAN WANG

Inventor's signature: Anchuan Wang Date: 9-10-03

Country of Citizenship: Peoples Republic of China

Full name of fifth inventor: BIKRAM KAPOOR

Inventor's signature: Bikram Kapoor Date: 9/11/03

Country of Citizenship: India

(Declaration ends with this page)

Application Data Sheet

Application Information

Application Type::	Regular
Subject Matter::	Utility
Title::	REACTIVE ION ETCHING FOR SEMICONDUCTOR DEVICE FEATURE TOPOGRAPHY MODIFICATION
Attorney Docket Number::	A8067/T51700
Request for Early Publication::	No
Request for Non-Publication::	No
Total Drawing Sheets::	12
Small Entity?::	No
Petition included?::	No
Secrecy Order in Parent Appl.::	No

Applicant Information

Applicant Authority Type::	Inventor
Primary Citizenship Country::	India
Status::	Full Capacity
Given Name::	Hemant
Middle Name::	P.
Family Name::	Mungekar
City of Residence::	San Jose
State or Province of Residence::	CA
Country of Residence::	US
Street of Mailing Address::	515 Boynton Ave, Apt 29
City of Mailing Address::	San Jose
State or Province of mailing address::	CA
Country of mailing address::	US

Postal or Zip Code of mailing address:: 95117

Applicant Authority Type:: Inventor
Primary Citizenship Country:: US
Status:: Full Capacity
Given Name:: Anjana
Middle Name:: M.
Family Name:: Patel
City of Residence:: San Jose
State or Province of Residence:: CA
Country of Residence:: US
Street of Mailing Address:: 2178 ShadowRidge Way
City of Mailing Address:: San Jose
State or Province of mailing address:: CA
Country of mailing address:: US
Postal or Zip Code of mailing address:: 95138

Applicant Authority Type:: Inventor
Primary Citizenship Country:: US
Status:: Full Capacity
Given Name:: Manoj
Family Name:: Vellaikal
City of Residence:: Santa Clara
State or Province of Residence:: CA
Country of Residence:: US
Street of Mailing Address:: 3707 Poinciana Drive, #68
City of Mailing Address:: Santa Clara
State or Province of mailing address:: CA
Country of mailing address:: US
Postal or Zip Code of mailing address:: 95051

Applicant Authority Type:: Inventor
Primary Citizenship Country:: Peoples Republic of China
Status:: Full Capacity
Given Name:: Anchuan
Family Name:: Wang
City of Residence:: Fremont
State or Province of Residence:: CA
Country of Residence:: US
Street of Mailing Address:: 46728 Crawford Street, #6
City of Mailing Address:: Fremont
State or Province of mailing address:: CA
Country of mailing address:: US
Postal or Zip Code of mailing address:: 94539

Applicant Authority Type:: Inventor
Primary Citizenship Country:: India
Status:: Full Capacity
Given Name:: Bikram
Family Name:: Kapoor
City of Residence:: Santa Clara
State or Province of Residence:: CA
Country of Residence:: US
Street of Mailing Address:: 2138 Santa Cruz Avenue
City of Mailing Address:: Santa Clara
State or Province of mailing address:: CA
Country of mailing address:: US
Postal or Zip Code of mailing address:: 95051

Correspondence Information

Name Line One:: Patent Counsel, M/S 2061

Name Line Two:: APPLIED MATERIALS, INC.
 Address Line One:: Legal Affairs Department
 Address Line Two:: P.O. Box 450A
 City:: Santa Clara
 State or Province:: CA
 Postal or Zip Code:: 95052
 Telephone:: 650-326-2400
 Fax:: 415-576-0300

Representative Information

Representative Designation::	Representative Number::	Representative Name::
Primary	37,234	William L. Shaffer
Primary	25,610	Peter J. Sgarbossa
Primary	37,771	Joseph Bach
Primary	43,855	Loretta A. Peters
Primary	37,165	Raymond Kam-On Kwong
Primary	35,412	James C. Wilson
Primary	25,436	Robert W. Mulcahy
Primary	27,431	Robert C. Colwell
Primary	41,405	Chun-Pok Leung
Primary	40,456	Patrick R. Jewik
Primary	39,496	Kent J. Tobin
Primary	44,037	Patrick M. Boucher

Domestic Priority Information

Application::	Continuity Type::	Parent Application::	Parent Filing Date::
This Application	Continuation-in-part of	10/279,961	10/23/02

Assignee Information

Assignee Name:: Applied Materials, Inc.
 Street of mailing address:: 3050 Bowers Avenue

City of mailing address:: Santa Clara
State or Province of mailing address:: California
Country of mailing address:: United States
Postal or Zip Code of mailing address:: 95054

PATENT APPLICATION

**REACTIVE ION ETCHING FOR SEMICONDUCTOR DEVICE
FEATURE TOPOGRAPHY MODIFICATION**

Inventor(s): Hemant P. Mungekar, a citizen of India, residing at
515 Boynton Ave, Apt 29
San Jose, CA 95117

Anjana M. Patel, a citizen of the United States, residing at
2178 ShadowRidge Way
San Jose, CA 95138

Manoj Vellaikal, a citizen of the United States, residing at
3707 Poinciana Drive, #68
Santa Clara, CA 95051

Anchuan Wang, a citizen of the Peoples Republic of China, residing at
46728 Crawford Street, #6
Fremont, CA 94539

Bikram Kapoor, a citizen of India, residing at
2138 Santa Cruz Avenue
Santa Clara, CA 95051

Assignee: APPLIED MATERIALS, INC.
P.O. Box 450A
Santa Clara, CA, 95052
A Delaware corporation

Entity: Large